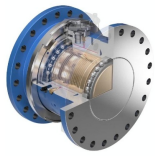
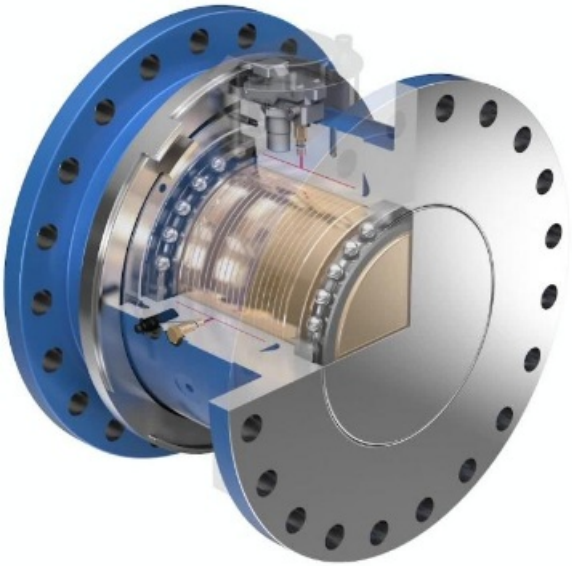


VOITH SmartSet Process Improving Coupling with Controlled Slip Owner's Manual

Contents

VOITH SmartSet Process Improving Coupling with Controlled Slip



Benefits

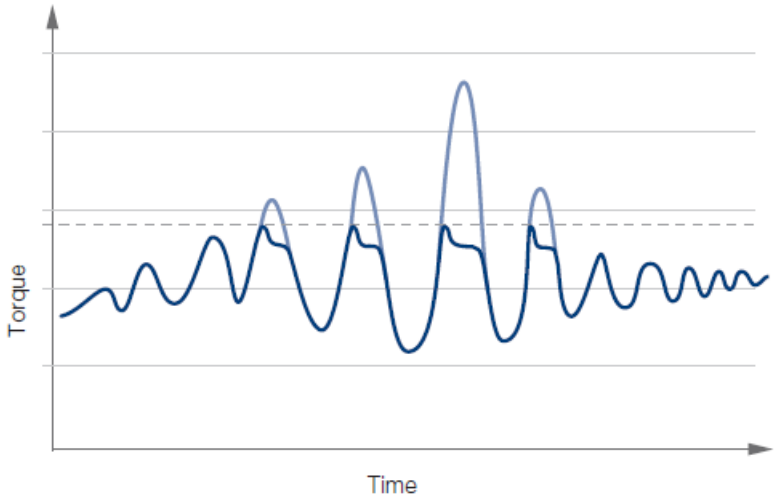
- Increases production uptime
- High utilization of investment
- Protects your driveline from expensive standstill costs
- Minimizes additional cost in the event of a upgrade of the driveline
- Minimizes cost of repair
- Minimizes standstill and downtime

SmartSet is a process improving coupling with controlled slip. It has the ability to slip without releasing to reduce short duration and dynamic torque peaksSmartSet improves processes and maximizes the output of the application by functioning as an adjustable peak shaver. It can reduce system transient torques with short slippages, without releasing. It can be adapted for start-ups or continuous drives that experience many short peaks.

Operation

The technology is the same as for the SafeSet coupling, but it is equipped with a SmartSet device that will give the coupling an additional slip feature. This centrifugal device is activated by the rotational speed of the intended application. This enables the coupling to slip during high transient torques. If the torque peak is of long duration in an overload situation, like a complete blockage, the SmartSet coupling can fully release as a normal SafeSet coupling and subsequently save the drive train from catastrophic failure. Torque capacity available between 10 to 10 000 kNm.

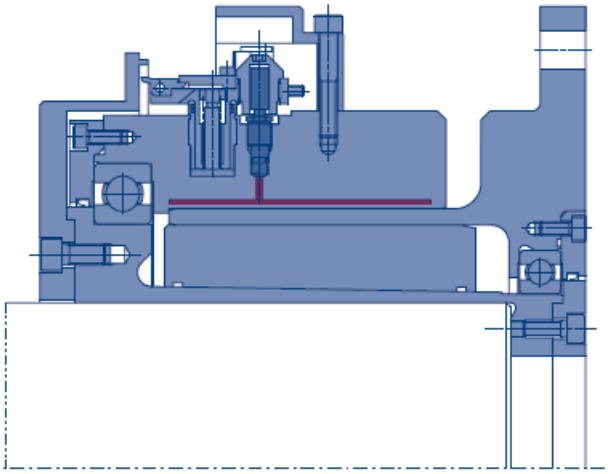
SmartSet basic principle



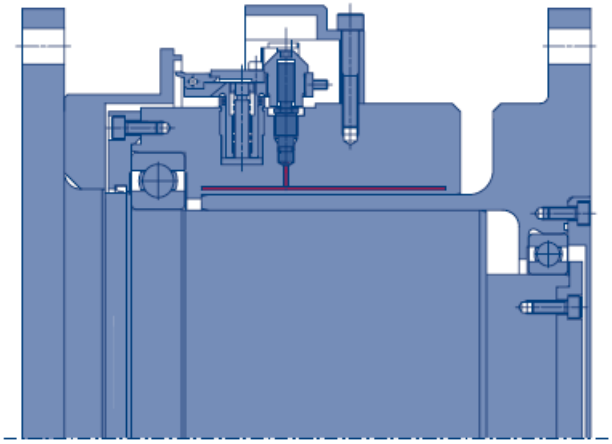
Normal slippage during transient start condition would be between 5-15 degree total.

- SmartSet set torque limit
- Torque peaks without SmartSet
- Controlled slip torque curve

SM-F for shaft to flange connections



SM-PF for flange to flange connections



TROUBLESHOOTING

Coupling and function	Features	Benefits
SmartSet Process improving coupling with controlled slip	Accurate release torque	Increases production uptime Due to precise point of release that gives higher safety margins in the production level, higher out put of the driveline and less repair of drive equipment
	Compact and flexible design	High utilization of investment Due to optimized driveline design – no need of changes in your existing driveline and can be positioned anywhere to maximize the driveline
	Instant torque limitation in overload situations	Protects your driveline from expensive standstill costs Due to minimized risk of overload and minimized delay time in production
	Adjustable release torque	Minimizes additional cost in the event of a upgrade
		of the driveline Due to adaptability to the existing driveline design and specific application requirements
	Back-lash free power transmission	Minimizes cost of repair Due to protection against wear on other parts in the drive line
	Set torque remains constant over time	Continous production process Due to no unwanted releases and reduced repair time
	Quick and easy resetting	Minimizes standstill and downtime
	Limitation of short peaks without release	Improves production uptime Due to no resetting needed for short peak event
	Automatic resetting of slip angle	Lower maintenance cost Due to no manual resetting needed
	Complete disengagement during a long peak event	Less investment cost Due to no manual resetting needed

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Documents / Resources

	VOITH SmartSet Process Improving Coupling with Controlled Slip [pdf] Owner's Manual SM-F, SM-PF, SmartSet Process Improving Coupling with Controlled Slip, Process Improving Coupling with Controlled Slip, Improving Coupling with Controlled Slip, Coupling with Controlled Slip, Controlled Slip

References

- Voith
- Voith
- Voith Group (@voithgroup) • Instagram photos and videos